



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,268	07/08/2003	I-Ming Lin	VIAP0056USA	1267

27765 7590 06/30/2005

NORTH AMERICA INTERNATIONAL PATENT OFFICE (NAIPC)
P.O. BOX 506
MERRIFIELD, VA 22116

EXAMINER

PEIKARI, BEHZAD

ART UNIT	PAPER NUMBER
----------	--------------

2189

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,268

Applicant(s)

LIN, I-MING

Examiner

B. James Peikari

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because the view numbers are not in accordance with 37 CFR 1.84(u)(1). For example, "FIG. 1" should replace "Fig. 1".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

Art Unit: 2189

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because it contains errors in grammar and syntax similar to those described below for the specification. Correction is required. See MPEP § 608.01(b).

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed, such as "UTILIZING AN ACPI TO MAINTAIN DATA STORED IN A DRAM".

5. The specification is objected to as being replete with errors in grammar, syntax and punctuation. Page 9 has been selected at random to demonstrate the number of errors that exist in the specification:

- (a) In line 2, "temporarily" should replace "temporally".
- (b) In line 4, a space should be inserted between "." and "Since".
- (c) In line 4, a space should be inserted between "Since" and "the".
- (d) In line 6, a space should be inserted between "d" and "on".
- (e) In line 9, a space should be inserted between "store" and "the".
- (f) In line 11, a space should be inserted between "." and "However".
- (g) In line 11, a space should be inserted between "," and "after".

Art Unit: 2189

- (h) In line 16, a space should be inserted between "art" and "can".
- (i) In line 17, a space should be inserted between "a" and "non".
- (k) In line 17, a space should be inserted between "such" and "as".
- (l) In line 18, a space should be inserted between "," and "as".
- (m) In line 20, "are both" should replace "both are".
- (n) In line 22, "for" should replace "of".
- (o) In line 22, "back" should be deleted ("returning ... back" is redundant).

A substitute specification including revised claims and abstract is required pursuant to 37 CFR 1.125(a) because of the numerous errors noted above.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claim Objections

6. Claims 1-23 are objected to because of the following informalities: the contain similar errors in grammar and syntax as described above for the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art on pages 1-10 of the specification, in view of any one of Chang et al., U.S. 6,542,996, or Thoulon, U.S. 6,128,747, or Jain et al., U.S. 6,633,987.

All of the features of the claims, but three, are described in the Background of the Invention section of the specification, including the computer systems of Figures 1, 2 and 3, including a processor for controlling operations of the computer system (*note CPU 32*), a dynamic random access memory electrically connected to the processor for storing data (*note DRAM 18 and paragraphs 20, et seq.*), a south bridge chipset (36) electrically connected to the processor and the DRAM, the south bridge chipset comprising: a system controller for controlling operations of the south bridge chipset (*note elements 48, 50 and 52*), a memory controller for accessing the data in the DRAM

Art Unit: 2189

(note paragraphs 14, 15 and 16, which describe control for accessing RAM), an integrated device electronics controller for accessing data in an integrated device electronics component (20 or 40) a data conversion circuit electrically connected to the memory controller and the IDE controller for converting a hard-disk access command transmitted from the system controller to the IDE controller into a memory access command of the memory controller wherein the memory controller accesses the DRAM (note the disk/IDE control and the "transformation" or conversion of paragraphs 14-16), power conservation including ACPI (note paragraph 17), a "suspend-to" operation (note paragraph 18), self-refresh of DRAM while the power is still on (note paragraph 20) and S1, S2, S3, S4 and S5 modes (note paragraph 18). As for the use of a buffer for temporarily storing data, all standard DRAM chips available on the market at the time of the invention included both input and output buffers.

The admitted prior art fails to specifically disclose that the above was integrated onto the south bridge chipset, however it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the elements above on the south bridge chipset since to make integral was not given patentable weight, note *In re Larson*, 144 USPQ 347 (CCPA 1965). This decision was later upheld for electrical circuitry by *In re Tomoyuki Kohno*, 157 USPQ 275 (CCPA 1968). Furthermore, to shift location of parts was not generally given patentable weight, note *In re Japikse* 86 USPQ 70 (CCPA 1950).

More importantly, applicant's admitted teaches using a DRAM in conjunction with a disk, but fails to teach that a DRAM could be used *instead of* a disk in conjunction with

Art Unit: 2189

an ACPI system, to achieve the benefits of both DRAM and disk – namely, faster access and retention of data during a power outage, respectively. This feature is at the heart of the invention and the specification uses this feature to distinguish the invention from the admitted prior art. However, this feature was explicitly taught by any one of Jain et al., Thoulon , or Chang et al. noted above.

In each of these references, ACPI is used to control a self-refresh of DRAM, in systems wholly compatible with the admitted prior art, except that DRAM may be used with or without a disk and the data will still be held in a non-volatile manner (e.g., using battery power for self refreshes, note Jain et al., column 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the ACPI control of DRAM of Jain et al., Thoulon , or Chang et al. in the systems described in applicant's admitted prior art since this would have provided the best features of both disk memory and DRAM, i.e., the faster access of DRAM and the retention of data during a power outage normally provided by disks.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Peikari whose telephone number is (571) 272-4185. The examiner is generally available between 7:00 am and 7:30 pm, EST, Monday through Wednesday, and between 5:30 am and 4:00 pm on Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim, can be reached at (571) 272-4182.

Art Unit: 2189

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center at 866-217-9197 (toll-free).



B. James Peikari
Primary Examiner
Art Unit 2189
6/26/05